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 February 02, 1990                                          No.4.05
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> 02/02/90: CPU Newswireâ ¢ #405  The Original 16/32 bit Online Magazine!
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    - The Editor's Podium                - CPU REPORT
    - Fast Technology - An overview      - FCC & ATARI?
    - THE BEAT GOES ON!                  - PC-DITTO II (hmmm)
    - DynaCADD 1.7 part II               - CPU CONFIDENTIAL

         --==== ****  MEGA ST2 DISCONTINUED! -> J&R ****====---
             -==** STE ON SALE THROUGHOUT EUROPE! **==--
              --=* $99.00 LYNX ANNOUNCED IN THE UK *=--
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> The Editor's Podiumâ ¢

     Here we are in the first few days of February 1990, alas, with the
situation we have at hand it seems like Feb. 1989. In the last twelve
months what have we actually seen from Atari besides TOS 1.4, the Lynx and
the Portfolio in the USA?   What we did receive was a profusion of
verbosity pertaining to the   future and   how Atari   was going to
specifically CATER to the US market, ..the US Market would have the first
release all new products for the year..(1989). Well 1989 has come and
gone and still, the best that can be said is Atari is moving ahead with
new products. That sadly, are not available in the USA.   ...Yet.

     We saw a low key release of TOS 1.4 which, in our opinion was prudent.
If one were to consider the fact that our neighbors to the north beat
Sunnyvale to the draw on the release of TOS 1.4 information and
HDX300-301 by a country mile.   Sadly enough, the release version of TOS
1.4 was broken! We now have Tos14fix.prg and poolfix3.prg.   The STE,
which uses TOS 1.6, has been shipped to "ALL POINTS" around the world and
released for sale.   ...EXCEPT of course, the USA. Speaking of TOS 1.6 it
too is broken and needs a tosfix.prg of its own. Apparently, it (TOS 1.6)
boots in only one rez regardless of the monitor in use..

     The Lynx is in very limited distribution and the Portfolio (the only
new computer related product in the US so far) is selling well but it is
just about to go through the 'baptism of fire' called the "Upgrade Blues"
this should get interesting in the coming months.

     In taking these events into consideration, it can be said that Atari,
even with the personnel changes and 'new product' releases, is quite
consistent. They are still manufacturing and shipping the new products
(STE) in large quantities to Europe first. It also appears there are no
plans to advertise nationally in the USA. They will however, do a nifty
ad campaign west of the Rockies because "most of the dealers are out this
way...."

     As we progress into 1990, we will, most certainly, begin to enjoy the
benefits of an expanded userbase resulting from the sale of the STE units
both in Canada and soon in the USA. There is no doubt the Stacy will
become available 'real soon now' and once it does, again the size of the
installed userbase in the USA will rise. That is just "what the doctor
ordered".

                    Thanks again for your strong support,
                             Ralph......

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                  THE GENIE ATARI ST ROUNDTABLE - AN OVERVIEW
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The Roundtable is an area of GEnie specifically set aside for owners and
users of Atari ST computers, although all are welcome to participate.

There are three main sections to the Roundtable: the Bulletin Board, the
Software Library and the Real Time Conference area.

The Bulletin Board contains messages from Roundtable members on a variety
of Topics, organized under several Categories.   These messages are all
Open and available for all to read (GEnie Mail should be used for private
messages).

If you have a question, comment, hot rumor or an answer to someone else's
question, the Bulletin Board is the place to share it.

The Software Library is where we keep the Public Domain software files
that are available to all Roundtable members.   You can 'download' any of
these files to your own computer system by using a Terminal Program which
uses the 'XMODEM' file-transfer method. You can also share your favorite
Public Domain programs and files with other Roundtable members by
'uploading' them to the Software Library. Uploading on GEnie is FREE, so
you are encouraged to participate and help your Roundtable grow.

The Real Time Conference is an area where two or more Roundtable members
may get together and 'talk' in   'real-time'.   You can participate in
organized conferences with special guests, drop in on our weekly Open
COnference, or simply join in on an impromptu chat session.   Unlike
posting messages or Mail for other members to read at some later time,
everyone in the Conference area can see what you type immediately, and can
respond to you right away, in an 'electronic conversation'.

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REPRINT FROM ISSUE #401

                         IMPORTANT ANNOUNCEMENT
                         ======================

Please, be advised that beginning with the current issue, #401, CPU
NewsWire will be available for Download regularly between 6 - 7pm friday
evenings.   The reason for the recent fluctuations over the past few weeks
are far too numerous to mention here. The fluctuations are however, at an
end.   We apologize for any inconvenience you may have experienced.
Henceforth, you may rely on our being on time, with the latest info and
news Fridays between 6-7pm.

     With the advent of ARCSHELL 2.1 and ARC 6.02, with their ease of use,
increased speed, reliability and efficiency improvements,   PLUS the
portability of the arc format to many other computers than just the ST has
given us good reason to no longer upload CPU/STR Newswire in dual formats
of ARC/LZH.   Therefore, beginning this week, 01-05-90, we will upload to
the major services in the ARC format only.   Please, do not misconstrue
this decision to stay with the latest arc format as a blanket denunciation
of all other file compression techniques as this is definitely not the
case.

                              Thanks for your support,
                                 Ralph F. Mariano
                              STR Publications Inc.

FIVE ISSUES LATER...

     Admittedly, we recently went to the LZH format, we did so as a result
of a number of requests from our readers.....   We found however, after
considering the "profusion of confusion" that has crept into the LHARC
arena, and the LACK OF COMPATIBILITY with other computer systems , we will
revert to ARC as originally intended.   Once the myriad of programs
dedicated to LZH become "standardized" in the ST arena and among other
computer systems, as ARC is, we will reconsider the use of the LZH format.

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> CPU REPORTâ ¢
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  Issue # 52
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by Michael Arthur

Remember When....

     In 1984, while engaging in lawsuits with up to 50 computer companies

which tried to illegally introduce Apple II Clones, Apple Corp. won a copyright infringement suit against Franklin Computer for their Apple II clone, which set a legal precedent for the protection of software by copyright, and when Apple used this precedent in 1988 as part of their lawsuit against Microsoft, which alleged that Windows 2.0 had infringed on an interface licensing agreement that Apple made with Microsoft?

CPU Systems Roundupâ ¢ XXII
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                    Dream Computer Systems V: The Empires Strike Back
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Part I

        Change is the only constant in the computer industry. As the capabilities of microcomputers increased during the 1980's, they began to provide the functionality, versatility, and speed of the workstation industry. Unix, for example, was once the domain of workstations and non-IBM minicomputers, but is now competing to become the operating system of the future for the microcomputer industry. However, while microcomputers evolved characteristics of workstations (including cost), many workstation companies began making low-end workstations, in an attempt to combine the innovations microcomputers had fostered, such as the idea of graphical user interfaces, with the inherent versatility of workstation-class machines. RISC (Reduced Instruction Set Circuitry) chips are an offshoot of this development, as their increased speed and use of modern chip technologies gave workstations the power of small mainframes. However, now that conventional CISC (Complex Instruction Set Circuitry) microprocessors, such as the Intel 80486 and Motorola 68040 chips, are as powerful as the best RISC chips, the choice to determine the best microcomputers only becomes more difficult....

        In order to explore this situation in depth, while providing a broad timespan in which to cover new developments, this "Dream Systems" series appears once every three months. The "Dream Computer Systems" series itself will also continue and expand its focus on workstation-class capabilities. Furthermore, since Local Area Networks are a logical use for these Dream Systems, Ethernet Networking is also being covered. This will only apply to microcomputer systems, however, since the Unix workstations have Ethernet ports as standard. To attempt to determine which Dream System really IS the best, I have made a list of the most powerful personal computers on the market, comparing their features to make an objective opinion.

        I have ignored variables like operating systems and software, and concentrated on the actual computers' features and speed, the greatest amount of mass storage you could attain, and the best graphics that system could provide. While operating systems and software are a definite factor in a computer, I wanted to aim for the best hardware itself, to which you could add the other items. However, since many of the high-end microcomputers featured here are beginning to rival workstations in both performance and price, this series will now include some low-end workstations in its analysis, in order to both study the state of high-end microcomputers as compared to low-end workstations, and to see whether these microcomputers outperform some workstations in certain aspects....

After doing some research, I found several configurations that could
   truly claim to be "Dream Systems".   Shown in no particular order, here is
   my list:

          (Warning: Do not be surprised by the Retail Prices Shown.)

   System #1

     - Cheetah Gold 33 - Total Cost of System: $20,100.00 Dollars

       This IBM Compatible is a 25 MHZ 80486 system with 4 Megabytes of RAM
   onboard, a built-in Math chip and VGA support, 5 AT Expansion Slots, and a
   Cheetah DTP Disk Controller, which (with 4 Megs of RAM onboard as a cache)
   provides for greatly increased Disk I/O speed....

        To further enhance this system, I would add a 1 Gigabyte Magneto
   Optical Drive made by Maxtor using Removable Cartridges, a Dell GFX-1024
   Graphics Performance Accelerator, with a TI 34010 Graphics Coprocessor,
   and future support of the TIGA Display standard, a 3Com Etherlink Card
   providing an Ethernet port, and an NEC Multisync 4D Monitor.

   So with this system, you would have:

           Cheetah Gold 33 w/25 MHZ 80486 chip (Cost: $5000.00)
           Cheetah DPT Disk Controller (Cost: $1500.00)
           3 SIMM Memory Modules w/2 Megs of RAM Each (Cost: $1800.00)
           Maxtor 1 Gigabyte Magneto-Optical Cartridge Drive (Cost: $8000.00)

           Dell GPX-1024 Graphics Board (Cost: $1500.00)
           3Com EtherLink Card (Cost: $300.00)
           NEC Multisync 4D Monitor (Cost: $2000.00)

   VGA Graphics Resolution: 320*200 with 256 Colors out of 256,000
                            640*480 with 16 Colors out of 256,000

           Extended Mode has 640*480 with 256 Colors out of 256,000
                             800*600 with 16 Colors out of 256,000
                             800*600 with 256 Colors out of 256,000
                            1024*768 with 16 Colors out of 256,000

   GPX - 1024 Resolution: 1024*768 with 256 Colors out of 16 Million

   Faults with System: None whatsoever. Unless you think that a system's
                        quality is based solely on its cost....

   System #2

     - Macintosh IIci w/FastCache IIci Board - Total Cost: $22,900.00

        This Macintosh uses a 25 MHZ 68030 with a 25 MHZ 68882 Math Chip,
   Four Megabytes of RAM, and 3 NuBus Expansion Slots. It also comes with a
   1.44 Meg High Density Disk Drive, and uses the SWIM (Sander-Woz Integrated
   Machine) Disk Controller chip to allow the Mac to read/write to MS-DOS and

OS/2 formatted disk. Also, a FastCache IIci memory cache card from DayStar Digital which (with 32K of Static RAM) boosts processing speed by 30 percent.

        To FURTHER enhance this system, I would add Mirror Technologies' RM600 Magneto-Optical Drive, which uses 650 Megabyte Removable/Erasable Cartridges like those found for the NeXT drive, an Adaptec Nodem, which is an Ethernet LAN Interface Unit that plugs into the SCSI slot, and a National Semiconductor Maccelerate Board, which is a DMA (Direct Memory Access) Controller that makes data transfer operations up to three times faster than before. Also, I would add one Mac IIci 4 Meg DRAM Expansion Kit from Apple, and a Taxan Ultravision 1000 Monitor to accompany a SuperMac Spectrum/24 Video Card, which lets the Mac have a 1024*768 display with 16 Million colors at the same time, and makes Mac Quickdraw operations display 5 - 10 times faster than before.

        The reason I didn't compile a Mac IIx setup with a 33 MHZ 68030 Card is that, with the FastCache IIci and the Maccelerate board, the Mac IIci's processing speed rivals that of a 33 MHZ Mac IIx system. Curiously, in tests done in the February 1990 issue of MacWorld, it seems that a Mac IIx with Daystar Digital's 50 MHZ 68030 board is only marginally faster than a Mac IIci with a Cache Card....

So with this system you would have:

        Macintosh IIci w/4 Megs of RAM (Cost: $7769.00)
        One Apple Mac IIci 4 Meg DRAM Expansion Kit (Cost: $2000.00)
        Maccelerate DMA Controller Card (Cost: $600.00)
        FastCache IIci Board (Cost: $300.00)

        Adaptec Nodem Ethernet Unit (Cost: $500.00)
        Mirror RM600 Magneto-Optical Cartridge Drive (Cost: $3500.00)
        Spectrum/24 III Video Board (Cost: $4500.00)
        Taxan 980 20-Inch Monitor (Cost: $3700.00)

Macintosh II Resolution: 640*400 with 256 Colors out of 16 Million

With Spectrum/24 it has 1024*768 with 16 Million colors at the same time.

Faults with System: An extreme amount of add-in peripherals. But other
                     than that, it is a SUPERB system....

System #3

   - SGI Personal Iris w/Geometry Engine - Total System Cost: $25,500.00

    This is a Silicon Personal Iris with a 20 MHZ R3000 RISC chip from MIPS Computer Systems, a R3010 Math Chip, and SGI's Geometry Engine chip, which does graphics coprocessing. It also has 8 Megs of RAM standard, a 170 Meg Hard Drive, a built-in Ethernet Port, and a color monitor....

 So with this system you would have:

        SGI Personal Iris system w/MIPS R3000 chip (Cost: $25,500.00 total)
        SGI 170 Megabyte Hard Drive (Included in System)

Iris Resolution:
              1024*768 with 16 million display colors at the same time

Faults with System: Hard Disk storage is mediocre, at best....

System #4

- Amiga 2000HD w/CSA Mega Midget Racer - Total Cost of System: $17,600.00

        This is an Amiga 2000 with 1 Meg of RAM, 7 expansion slots, and an
A2091 Hard Disk Controller.   With this would be a CSA Mega-Midget Racer,
with a 33 MHZ 68030, and a 33 MHZ 68882 Math Coprocessor, two ProRAM 2000
RAM Expansion Cards from Progressive Peripherals with 4 Megs of RAM each,
and a CSA DragStrip Card to speed up the 16-bit RAM into 32-bit RAM, for a
total of eight Megabytes of 32-Bit RAM.

        I would also add Supra's FD-10 Removable Disk Drive, which supports
10 Meg Floppy disks, and a 300 Megabyte Hard Drive made by ABCO, install
Commodore's upcoming Enhanced Chip Set for the Amiga, which boosts its
graphics capabilities, Microway's FlickerFixer board, which gives the
Amiga a noninterlaced 640*400 resolution with a Multisync monitor, and the
Ameristar Internet Package, which is an Ethernet board for the Amiga.

So with this system you would have:

        Amiga 2000 w/7 Expansion Slots (Cost: $1900.00)
        Amiga A2091 Hard Disk Controller (Cost: $300.00)
        CSA Mega-Midget Racer Accelerator (Cost: $1700.00)
        CSA DragStrip 32-Bit RAM Adapter (Cost: $800.00)
        Amiga Enhanced Chip Set (Cost: Around $200.00)

        2 ProRAM 2000 Memory Cards w/4 Mb of RAM each (Cost: $2500.00)
        Supra FD-10 Removable Floppy Drive (Cost: $1000.00)
        ABCO 300 Megabyte Hard Drive (Cost: $4000.00)
        Microway Inc. FlickerFixer (Cost: $600.00)
        Taxan 980 20-Inch Monitor (Cost: $3700.00)
        Ameristar Ethernet Board (Cost: $900.00)

Amiga Resolutions: (Not including Overscan)
                320*200 with 32 colors out of 4096
                320*200 with 64 colors out of 4096 (Extra Half-Brite)
                320*200 with 4096 colors at the same time (HAM Mode)

                640*200 with 4 to 32 colors
                640*400 with 2 to 16 colors (interlaced)

With Enhanced Chip Set:

    640x256, with 64 displayable colors out of 4096
    1280x200 with 4 colors out of 64

  - 640x960, with 4 colors out of 64 (interlaced)
  - 1280x400, with 4 colors out of 64 (interlaced)

With FlickerFixer:

    640*400 with 2 to 16 colors (noninterlaced)

Faults with System: All but ONE of the Amiga 2000 Dream System's Slots
                    are taken up by its Third-Party peripherals, which

erases much of its future expandability. Also, it
                         has a comparatively small amount of hard disk
                         storage....

System #5

   - Sun SPARCStation 1 w/16 Megs of RAM - Total System Cost: $26,500.00

        This is a Sun SPARCStation 1 with a 20 MHZ SPARC chip running at 10
to 12 MIPS, a 20 MHZ Weitek 3167 Floating Point Math Chip, 8 Megs of RAM
onboard, 1 S-Bus Expansion Slot, Color Monitor, a 1.44 Meg Disk Drive, and
a built-in Ethernet port.

        Along with this would be a Sun 650 Megabyte Hard Drive, and two Sun
Memory Expansion Kits, with 4 Megs of RAM each, for a total of 16 Megs of
System RAM.

So with this system you have:

        Sun SPARCStation 1 w/Color Monitor (Cost: $12,500.00)
        2 Sun Memory Expansion Kits w/4 Megs of RAM each (Cost: $4000.00)
        Sun 650 Megabyte Hard Drive (Cost: $10,000.00)

SPARCStation Resolution: 1152*900 with 256 Colors out of 16 Million

Faults of System: A higher monochrome resolution should be developed, and
                   hard disk storage is far too expensive....

System #6

  - Abaq Transputer w/300 Meg Hard Disk - Total Cost of System: $30,000.00

        This is an Abaq Transputer with a 20 MHZ T800 Chip having a built-in
Math Coprocessor, 4 Megs of RAM, and 4 Expansion Slots. Along with this
would be two Abaq M112 Expansion Cards, each having 4 T800 Chips and 4
Megs of DRAM onboard, and one Abaq F104 Expansion Card, with 1 T800 chip
and 1 Meg of RAM standard, for a total of 10 T800 chips and 13 Megs of
System RAM. Since Helios can read/write to MS-DOS disks, and the ATW uses
a Mega ST Motherboard as an I/O processor, an ABCO 300 Megabyte Hard Drive
for the ST should be able to be used.

So with this system you have:

        Abaq Transputer w/4 Megs of RAM (Cost: $8000.00)
        Two ATW M112 Expansion "Farm" Cards (Cost: $12,000.00 total)
        ATW F104 Expansion "Farm" Card (Cost: $2000.00)

        ATW X100 Ethernet Interface Card (Cost: $1100.00)
        ABCO 300 Megabyte Hard Drive for the ST (Cost: $3200.00)
        Taxan Ultravision 1000 Monitor (Cost: $3700.00)

Abaq Resolutions: 1280*960 with 16 Colors out of 16 Million
                   1024*768 with 256 Colors out of 16 Million
                   640*480 w/256 Colors out of 16 Million (Double Buffered
                   screens for high speed animation)

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                     512*480 with 16 Million Colors at the same time

Faults of System:  Hard disk storage is decent, but comparatively
                   weak.  Also, it is the highest-costing system....
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        Notice I did not mention products that aren't shipping yet, like the
68030 TT, or products which have not been fully announced, like
Commodore's new Amiga 3000....

        In Part I of this series, I have given a list of the best systems to
be found currently in the market, and shown the individual features which
make the system. In Part II these Dream Systems will be compared to each
other, in order to determine which is the "best" one.

        But this issue alone indicates many changes in the structure of the
Dream Systems.   The Mac IIci Dream System has steadily grown in features,
and gained a speed increase WITHOUT an accelerator board.   It is a good
contender, competing on a level with the other systems. The IBM Dream
System, which has always been a powerful system with steady and noteworthy
increases in its capabilities, now gains the virtue of having good
price/performance, as it is one of the least expensive systems on the
list.   Also, the Intel 80486 chip rivals the RISC Workstations in
performance. A "new" entry, the Amiga 2000 Dream System has made a
stunning introduction, with speed and graphics capabilities on a par with
the other computers on this list.

        In the workstation field, the SPARCStation 1 is a very well-balanced
system with superb versatility, but the SGI Personal Iris, with similar
speeds and graphics equalled only by the Mac and ATW systems, has stolen
much of its thunder.   Now that it has been fully introduced, we now see
that the ATW, while being superior in graphics and speed, can be
comparatively expensive for a "Dream Systems" setup. The NeXT Computer
has been taken out of this Dream Systems Essay, primarily because of
reports that its operating system software drastically slows its
theoretical performance. While a 68040 upgrade and a Color Board are
forthcoming for it, there are several other systems which are steadily
improving in features at this time....

But ponder, if you will, these questions:

1) Is the word, "Workstation" a more appropriate term for microcomputers
    than simply the word, "Computer", given the type of operations that
    computers now perform?

2) Could a 25 MHZ 68040-based computer be faster to design and cheaper to
    produce than a system using a 25 MHZ 68030 and a 25 MHZ 68882?

CPU STATUS REPORTâ ¢
==================

Syracuse, NY   Robert Tappen Morris has been convicted of creating and
------------   releasing a computer "worm" which eventually disrupted
                   the Internet network in November 1988. Morris had
                   testified in his trial that he wrote the worm, and will

be sentenced before March. He faces a penalty of up to
5 years in prison, and a $250,000 fine...

The jury took over six hours to reach a verdict. Also,
it seems that the law that Robert Morris (the son of
the head of the National Security Agency's computer
security division) was convicted under can hold a
person legally liable for damage caused by a computer
worm or virus, even if the person didn't intend to
unleash a destructive virus....

Austin, TX   Motorola recently introduced the Application Binary
----------   Interface (ABI) for AT&T Unix System V Release 4. It
                    is available in versions for the 680x0 microprocessor
                    line, and the Motorola 88000 RISC chip. An ABI allows
                    Unix software developed for a given type of chip to run
                    unmodified on all Unix-based computers which use that
                    type of CPU.

                    This means, for example, that any Unix program written
                    with Motorola's 680x0 chip ABI will be compatible
                    with ANY Unix-based computer which supports the 68000
                    ABI Specifications Standard. Commodore is reportedly
                    considering using this in their Amiga 3000, an upcoming
                    low-end Unix workstation....

                    Interestingly enough, it seems that supporting this
                    ABI may be the quickest way to get System V Release 4
                    (the newest version of AT&T Unix). And given that ALL
                    future 680x0-based Unix machines will be supporting
                    this standard....

Cambridge, MA   Lotus Corp. has announced a new version of Lotus 1-2-3
-------------   Version 3.0 for the entire Sun workstation line. It is
                     scheduled to be available in the Second Quarter of
                     1990. Cost: $695 for the Standard Edition, and $495
                     for a Node Edition for installing 1-2-3 in a Network of
                     Sun systems. Lotus also says that a Mac version of
                     1-2-3 is still in development. However, a version
                     of Lotus 1-2-3 for other Unix-based machines may be in
                     the horizon....

Hopkins, MN   Image Systems Corp., the same company who made the
-----------   Video Board used in Moniterm's 1280*960 monochrome
                     monitor for the ST, has introduced a new Ultra-High
                     Resolution Color Board for the Mega ST, which fits in
                     the Mega ST Expansion Slot. It provides a 1024*768
                     resolution with a choice of either 2 or 16 displayable
                     colors, available from a 4096 color palette. It
                     supports the Blitter chip, and can be used with any
                     multisync monitor that is capable of running at a
                     50 KHz horizontal scan rate. Cost: $800.00....

                     In case you are interested in this board (which also
                     has a socket for Motorola's 68881 and 68882 math chips)
                     Image Systems' numbers are 1-800-462-4370, and
                     1-612-935-1171....

Errata: CPU Report Issue 37 stated that the Amiga's new Enhanced Chip Set
======= (ECS) would have a 24-bit (16 million color) palette. The new
         version of the Amiga ECS's Denise chip will actually give the
         Amiga these new resolutions:

                      Noninterlaced Resolutions:

   - 640x256, with 64 displayable colors out of a 4096 color palette.
   - 1280x200 with 4 colors out of 64.

                       Interlaced Resolutions:

   - 640x960, with 4 displayable colors out of a 64 color palette
   - 1280x400, with 4 colors out of 64.

                            PRESS RELEASE

                        Contact: Steve Riker

                         (619)   566-3911

    "Mega-Midget Racer(tm)," MC-68030 Accelerator for Amiga(tm)

San Diego, CA: Computer System Associates, Inc.

(CSA) announces the latest in MC-68030 accelerator technology; the
"Mega-Midget Racer(tm)".   The first and only MC- 68030 accelerator to
employ state-of-the-art surface mount technology and plug into Amiga A500
or A2000. Evolving from CSA's very popular Midget Racer(tm), "Mega-Midget
Racer" features include selectable clock speeds of 20, 25 or 33 MHZ,
support for floating-point math co-processor at speeds up to 40 MHZ,
32-bit 512KB SRAM for operating system kernal, 32-bit RAM expansion bus,
and software-selectable MC-68000.

The asynchronous design of the "Mega-Midget Racer" permits blazing fast
CPU performance at 20, 25, or 33 MHZ through an easily changeable crystal
oscillator and an optional MC-68881 or 68882 math co-processor at clock
speeds up to 40 MHZ for racing through number crunching applications.
Users   may   choose   less   costly   20 MHZ 030's while providing a
high-performance accelerator which is readily expandable to maximum
performance. An optional 512KB, 32- bit SRAM module allows copying the
Amiga ROM kernal into high- speed, 32-bit SRAM for lightning-fast screen
refreshes, page flipping, scrolling, and image processing. A full 32-bit
wide expansion bus provides support for high speed memory and I/O devices
in 8, 16, and 32-bit configurations.

The "Mega-Midget   Racer(tm)" assures complete software and hardware
compatibility by resocketing the MC-68000 on board for easy software
switching to either MC-68030 or MC-68000 operation.

The "Mega-Midget Racer(tm)" is priced at $795.00 with a 20 MHZ MC68030
installed. For more information, contact CSA at (619) 566-3911.

                        THE MEGA-MIDGET RACER

                      "ALL YOU'LL EVER NEED!"

                    FEATURES YOU CAN'T IMAGINE
                    AT A PRICE YOU CAN AFFORD.

1) MC68030 CPU
   a) asynchronous design.
   b) clocked at 20, 25, or 33MHZ, or any speed in between.
   c) oscillator defines speed: no jumpers necessary for control.

2) REPLACES MC68000 CPU ON AMIGA 500 OR 2000 MOTHERBOARD
   a) 68000 CPU is resocketed on board and is software selectable.
   b) 100% compatibility is achieved by using on-board 68000.

3) OPTIONAL HIGHSPEED, 32-BIT, 512KB SRAM AREA
   a) sockets for four 128K x 8-bit SRAM chips or modules.
   b) Amiga ROM kernal is copied into and then executed out of the
      highspeed, 32-bit SRAM. (NOTE: special hardware allows this to be
      done without using the 68030's MMU, so that it is free for use by
      other software.)

4) FULL 32-BIT EXPANSION BUS
   a) 32-bit data bus
   b) 32-bit address bus
   c) capable of supporting highspeed memory and I/O devices in 8, 16, and
      32-bit configurations.

5) SPECIAL CACHE CONTROL LOGIC
   a) a special cache control PLD(Programmable Logic Device)provides safe
      data and instruction caching from ROM and 16/32 bit memory.
   b) special-configuration cache control PLDs can be ordered for expanding
      data cache environment.
   c) cache control PLD is socketed for easy replacement.

6) OPTIONAL MC68881 OR MC68882 FLOATING-POINT COPROCESSOR
   a) clocked at 20, 25, 33, or 40 MHZ, or any speed in between.
   b) can be clocked by CPU's oscillator or by a second, faster one.

7) USES SURFACE-MOUNT TECHNOLOGY/EXTRA POWER/STAND-OFFS
   a) only user installable parts are socketed.
   b) all other parts are surface mounted to save space and enhance
      reliability.
   c) extra power-connector, compatible with disk drive cable, supports
      external power source.
   d) plastic stand-offs provide sturdy physical support.

CONTACT CSA at (619) 566-3911 FOR A COMPLETE DESCRIPTION OF FEATURES.

Actually this information is a little outdated, as they now have the CPU
running at 40mhz, not 33mhz, and when Motorola releases their 50mhz 68030
it will run on this board. I have seen the board in operation and it is
fabulous, and I would love to see it on the Atari, perhaps, we will.

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                              FAST TECHNOLOGY AND JIM ALLEN
                              =============================

by Jim Allen

             So, ... you want to know about Fast Tech.....

    As a young engineer, I got a job at a machine vision company called
Itran, they make machines that "look" at parts and taking measurements and
checking quality. It was all 68000 based and so I became very well
trained in 68000 computers. Finally the day came when I wanted a personal
computer, the Mac was real new as was the ST. The Mac was $3000 and the
ST was $1199 so which do you think I bought? Of course...an ST. I didn't
want anything to do with MESSYDOS it was so very "old fashioned".

    So, I became an ST user in 85', I have always had this habit of
becoming an expert in the things I'm interested in so, I read everything I
could about the ST and used it as a test pad for many of the little HW
projects I became involved in. By the time an Atarifest came to my area
in Oct 87' I had gone all the way to the point of putting a CSA 020 board
into the ST. This is an off the shelf 020 to 68000 board that helps ease
the way when converting systems that you design over to the 020. I had it
running   diagnostics   and   the   like   but   discovered, to all our
disappointment, that the TOS operating system was completely and utterly
incompatible. So I decided I'd go to the show and bring the computer along
and see if Atari might be interested or at least help me out on the TOS
situation.

    Well, the reception I got was quite interesting, Neil Harris told me
it was impossible, engineering had said so, and to move along. Moving
right along I then cornered Leonard Tramiel, same story, he just didn't
believe me at all or so my impression of his interest in what I was saying
went.   And as he was quite busy with dealers and such, I simply resolved
myself to the fact of not getting any help from Atari.

    As I wandered through all the exhibits, I came across two interesting
products...PCDITTO and Magicsac. I met Bill and Ginnie Teal and they were
just about the nicest folks you could meet. They offered to help out if
they could, they actually wanted some kind of accelerator to come out
since PCDitto needed a speedup.   Ever since then the Teals have always
been there to help out when and where they could. Of course I bought a
PCDitto. They even passed on to me the IDRIS system that allowed me to do

some further testing as it was immune to all the software incompatibilities.

At the same show was a guy named Dave, he had these funny little "rabbit" bags he was selling, something about MAGIC? Well of course, I had always WANTED a Mac so I bit. Got the "pro" package with translator and was a devoted follower of "the Dave" from then on. Over the last couple years we have swapped horror stories about Atari and help each other out with hardware funny's. He volunteered to beta test any accelerators I came up with and I agreed to sell him my ZAX emulator. It was a good trade.

Everytime I talked to either the Teals or the Smalls they told me over and over that an accelerator was needed, desperately. There seemed to be a good potential to sell something. But what? After running through the numbers a zillion times it seemed only a 16Mhz 68000would be inexpensive enough to sell well as a compliment to a low cost computer. Off I went to the lab to get the T16 created. After struggling to find any type of REAL documentation for the ST like schematics, even becoming a real developer, there was a void to be filled.

I finally got some schematics from a local dealer. I had to twist his arm but he finally gave in. From there is was just weeks of late nights after hours at Itran, with pauses to deal with Itran crisis's, and a lot of dead PALs. About $600 in dead 16R4D PALs, boy do I wish I had known about GALs sooner!!!! It would have cost me $40 instead. I took a rough, and I do mean ROUGH, prototype alot like the JATO board and sent it to the Teals. Well frankly they were underwhelmed, it gave only a tiny speedup and it crashed alot. Obviously more was needed, but how? Then it struck me, everyday I sit and type on a Sun workstation and it is really fast. Why? Well it probably is the 68030 but it also has a CACHE!!! Yes a RAM CACHE to speed up the overall throughput of the processor in getting data to and from memory. Viola' we had the solution, almost. Turns out caches are quite expensive and complicated so I spent the next couple of months designing a really unique, bullet-proof, and inexpensive cache. There are alot of engineering details I'll skip but that was going to be the ticket.

Along came fall 88' Comdex and off I went, to once again meet the folks that had helped so much, not to see Atari. I caught up with the Teals and showed them the less rough prototype and they were impressed by the possibilities. It looked horrible but the expected performance was good. Bill and Ginnie then showed me the "ropes" and told me all about this market and who to go to from there. They gave me sales leads and distributor and dealer introductions and finally even bought dinner. They even let me take a nap in their hotel since I was in at 1AM Wednesday morning and back out red-eye Thursday morning with no place to sleep. I did bring along a few hundred bucks to loose at the tables.

Dave was there too and we talked for an hour about what Spectre does and all sorts of secret stuff to make sure the T16 would operate correctly as a Mac. Back to the lab I went, to finish the T16, which with all the different versions of the Atari out there to interface to, took another 5 months to complete. With real clean prototypes in hand it was time for the World of Atari, actually the World of People involved with Atari Products.

I picked up a business partner along the way and off we went to the show we even had a booth. It was a hit, sort of, the JATO was there and we were faced with a real problem. We were much faster however, the

differences were so technical that it was going to be tough job to explain in understandable layman's terms.

I had determined in Feb that we needed to really put the pressure on marketing-wise to get this product sold quick since it might be copied right away. The Teals had connected me with Nevin Shalit, a writer for ST Informer, and we sent him a prototype to do a story that would come out just in time for the show...smart huh? He did a great report, very truthful and very thorough. It helped alot, we were kinda late getting our registration in for the show but Rich Tsukiji bent over backwards to help...an accelerator, WOW!!! He gave us a great booth and the show was a real hit. Again I spent time with the Teals who were there showing PCDitto II and the Smalls who had a proto GCR and were absolutely swamped by the crowd every second. If you ever enter a show be sure to get beside Gadgets, of course you'll have to use the other side since I'm on one side already!!!

I met most of the developers and they are all a great bunch, not stuffy like Mac and IBM developers, these are real people.

After the show we set out to get up the $$$ needed to make a bunch of T16s, we also instituted a big testing program and made a dozen protos to send out to people to test with. We found a bug with Calamus and tracked down ahead of time all the incompatibilities we could find. That way what we couldn't "fix" we could tell people up front so they wouldn't get a surprise. We did fix the Calamus bug which was related to the blitter and a couple of the peripheral chips and the need for a "rest" between accesses. Then we faced the CMI problem. CMI suddenly appeared with full page color ads in STart and alot of mumbo jumbo, we decided to wait and let them crash and burn before plunging a life savings into the business. Business is a risk but lets not go LOOKING for trouble!!! We waged a war in the media, getting each magazine to review the accelerator boards and report the truth as to which was a better bargain. Sure, T16 would only offer the most speed for the most money, but after all it was an accelerator.

The T16 was to be priced at $399 but the CMI situation forced us to lower it to $299, this was a mistake because the T16 is now only marginally profitable. As we all found out, the CMI units weren't any faster than the JATO and they didn't work as well ours either. We lost about 300 sales in the US because of CMI, and those are people who won't be back no matter how good the magazines say the T16 is. Since CMI went under we have just been slowly building systems to fill the back orders we received in a manner that makes sure we will be around for a while. I know it is a pain waiting for the T16 but better everyone wait a little than Fast Tech stick it's neck out and go under. That would mean NO T16s no matter how long the wait. Building surfacemount products is a business that requires extreme care, we have been bitten by bad raw PC boards, bad assembly practices, and even late shipments of simple ram chips... surface mount package stuff. So that is where we are now, your up to date, T16s are rolling out the door and everyone will have one very soon.

Special thanks goes to Dave and Sandy Small, and Bill and Ginnie Teal, and Nathan Potechin, and ST World, ST Informer, and ST Xpress for all the help and encouragement they have given Fast Tech, we wouldn't be here if it weren't for them...and of course, Ralph Mariano and STReport too.

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> DynaCADD 1.7 CPU/STR Reviewâ ¢   "When only the best will do..."
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                    DynaCADD 1.7 VS AUTOCAD REVISION 10
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Part II
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by Myles Goddard

        It will be rather difficult to compare Computer Drafting and Design
packages when one considers the two programs that have chosen to be
included in this review, DynaCADD 1.7 and AutoCad Version 10.   They are
however, professionally speaking, two of the most powerful CaDD programs
available today.

        First thing we have to realize, of course, is that AutoCad has been
in the IBM market since the early 80's and DynaCADD is a relative newcomer
on the scene. I will try to make as thorough a review of the two programs
as is humanly possible.   Needless to say, it can not be done in one
article. I have decided to make a series of articles so that a thorough
comparison can be made of these two superb products. Be mindful this is
not intended to become a positive - negative type review but a thorough
presentation of both programs.   Thusly affording the reader a marvelous
opportunity to make a well informed decision.

        Before beginning, I would like to say that I have been working with
AutoCad for over a year now on a regular basis. I have an IBM AT 286 at
home and am very comfortable with using the commands and features of
AutoCad.   I have only been able to work with DynaCADD 1.32 on a hit and
miss basis. I like the resolution and clarity of DynaCADD on my SM124
monochrome monitor and the ease of the icon environment incorporated in
DynaCADD.

        The chief advantage of Autocad at this time is the ability to change
many configurations of the program. For example, it allows me to use the
maximum resolution of my graphics card, which is 1024 x 768, but I prefer
800 x 600 with 16 colors.   In my opinion, this is a great advantage,
especially when you have several layers that you want in different colors.
But on the other hand, I was able to use Dynacadd 1.7 on a VIKING II 19"
monochrome monitor with a resolution of 1280 x 960 at 16 mhz and the
results were astounding. I am told that DynaCADD is available for the IBM
and is identical to the ST version. Unfortunately, I do not have the IBM

Dynacadd version to review so I will compare the ST version of DynaCADD
with the alleged, industry standard, Autocad 10.

                          SYSTEM REQUIREMENTS

     The minimum requirements for AutoCad Versions 1 through 8 to work on
     an IBM system is:

     IBM XT with minimum of 512K (640K highly recommended)

     Monochrome or Color monitor

     Hercules Graphics Card (EGA or higher recommended)

     One serial port, One Printer port

     High density floppy PLUS Hard disk

     Input Device (Mouse or Digitizer tablet)

     Dot Matrix printer (Plotter preferred)

     Please note that Autocad can be used with keyboard entry but results
in extremely time consuming input.   Also, even though Autocad supports
Hercules and CGA displays, severe eye fatigue can result in using these
displays. EGA is normally the minimum resolution required and offers good
eye relief over long periods of time.   I personally prefer VGA for the
higher resolution. If possible, use a multisync monitor for flicker free
display. You will appreciate it I guarantee it.

      Autocad Versions 9 & 10 require:

     IBM XT (286 or 386 preferred) 8 mhz or faster

     512K minimum memory (640K or EMS recommended)

     Math co-processor required (will not run without one)

     Monochrome or Color Monitor (VGA or Multisync Color
     highly recommended)

     1.2 Meg High Density floppy drive (720K will work but
     disk swapping will drive you crazy)

     Hard disk a must (especially since Autocad accesses
     the information on a hard disk frequently)

     Input device (Mouse & mouse driver) or Digitizer
     tablet & driver) I prefer the mouse as input but many
     prefer a tablet. Autocad supports over 30 drawing
     devices.

     Dot matrix printer (Plotter preferred, although printer
     can give satisfactory quick printouts of your drawings)

Laser printer gives superb results with Autocad.

                         GETTING STARTED

     After you have installed AutoCad (preferably on your fixed disk)
you will be greeted with a notice that you have not configured AutoCad.
In other words you have to go into the main screen option 5, to configure
AutoCad to suit your personal computer system.   This is easy to do,
although it does take some time to get it customized.

     AutoCad versions 1 through 8 have pseudo-3D support, that is, it
would probably be more accurate to describe it as isometric views, just
like the hand drawings you did on your drafting table. AutoCad 10 uses
full 3D as well as shading to make the objects drawn as authentic as the
real thing.   Another difference that version 10 has over the older
versions is that it supports drop down menus and semi-alert boxes, or as
they are called in the program, Ddrmodes. This allows AutoCad to offer
input from the mouse (Drop Down menus), Keyboard entry (if you can
remember the commands), or the side menus (by means of Tablet or mouse).

     Below, is a meager rendering of the AutoCad Drawing Editor.


```
|----------------------------------------------------------------|
| Layer 0                          0.000,0.000                   |
|----------------------------------------------------------------|
|  Status line                                  | AutoCad  |
|                                               | ******** |
|                                               | Setup    |
|                                               |          |
|                                               | Blocks   |
|                                               | Dim:     |
|                                               | Display  |
|                                               | Draw     |
|               DRAWING AREA                    | Edit     |
|                                               | Inquiry  |
|                                               | Layer:   |
|                                               | Settings |
|                                               | Plot     |
|                                               | UCS:     |
|                                               | Utility  |
|                                               |          |
|                                               | 3D       |
|                                               | Ashade   |
|                                               |          |
|    <--  UCS Icon                              | Save:    |
|----------------------------------------------------------------|
|   Prompt Area                                 Menu Area  |
|----------------------------------------------------------------|
```


     So far, it has taken four pages to describe the system requirements
and setup to use AutoCad on an IBM system.   Taken into account the
complexity of the program and the many variables of the users's own
computer system. I think you will find that DynaCADD is much easier to

install on the Atari ST system.

   Here are the requirements for installation of DynaCADD-

   Atari 1 meg 520ST, 1040ST or MEGA w/ DS drive

   SM124 Monochrome monitor or Multisync Color w/adaptor
   for use with ST. I have found that the clearest &
   sharpest results are when using the Moniterm monitor.

   Hard Disk (Nice to have but not necessary for DynaCADD)

   That's it folks.   If you have the hardware listed, you can get
started right in with DynaCADD. Just place disk one of DynaCADD into the
DS drive and click on DynaCADD.PRG and you are off and running.

   Subsequent installments of this review will appear on a weekly basis
in CPU NewsWire ...

                                 Until next time,

                                 Myles Goddard

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> THE BEAT GOES ON! CPU/STR Spotlightâ ¢   What it all really looks like.
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                 IS THE US MARKET BEING GIVEN A FAIR SHAKE?
                 ==

by R.F. Mariano

   Atari has, in the past, been a disappointment as far as national
advertising campaigns and timely delivery of announced new products aimed
for the US marketplace is concerned. There is no doubt that extenuating
circumstances can and do cause a good number of these situations.
Hopefully, by bringing this to your attention, it is hoped to resurrect a
positive, corrective attitude.   And at the same time, request that the
users/readers please institute a positive letter campaign directed to
Atari's CEO; Sam Tramiel.

   It appears the same old problems are still haunting us. For example,

let's start with the Lynx, (an excellent color LCD hand held game machine)
this jewel could have turned the tide if it had been to market in time for
Christmas, but no... completely bungled by 'whomever', Atari blew another
Christmas marketing season completely.

    Along comes the fabled STACY, the fantastic laptop we all have seen
from time to time (outside of California) as far back as WOA Dearborn
where Chris Roberts performed his, now famous, juggling act. Thankfully
the Smalls (GBS) were gracious enough to rebuild the trashed STACY. It is
a mighty impressive computer but where is it and who can buy it and on and
on and now...??? Which type acceptance and why Class A as opposed to
class B and is the FCC really going to go for this "Midi Controller" hype?
The Stacy is a computer plain and simple, a portable, laptop computer.
Why play the name game? Why is this device having so much trouble making
the grade? Especially when it is now very much in evidence that many of
the current ST users will purchase a Stacy the moment they are available.

    STE ...Not much to say here other than why? Why is it on sale all
over the globe and not in the States?   Is this another of the grandiose
marketing schemes designed to "blow our socks off" or just blow us off?
The STE has just recently been submitted to the FCC for type acceptance.
Or, so they say..   The BIG question is; why wasn't this thing tested in
house months ago BEFORE being released for sale all over the world except
OBVIOUSLY the USA? Was this done purposely to embarrass Sam who promised
the USA would not be neglected and would enjoy having products released
here first?   We are told that Atari does its own tests for FCC type
acceptance with in-house tests and the use of a local facility not unlike
the FCC's where they perform the same basic tests as the FCC. Many of the
above questions are being heard all over the US Userbase, in almost every
usergroup at one time or another. The STE is quite a machine and is
expected (our own optimistic estimate) to be on sale in the States within
90 days.   Now, if only they could hear us begging for them to put the STE
in a Mega style cabinet... And call it a MEGA STE.

    The crippled MEGA2 recently released was likened to Atari mooning the
entire worldwide market. Did they really think that the market (all of
us) would sit still for this outrageous insult to our intelligence? To
purposely cripple a PCB to prohibit an in-the-field memory upgrade is
unconscionable as far as marketing and public relations are concerned.
This action solidifies the impression that Atari appears to have very
little intention of interacting favorably with its US userbase.   As a
result of all the bad feelings, according to a large east coast
distributor, J&R Music, the manufacture of the MEGA2 computer has been
discontinued. Where most all the various delays and changes can be 'lived
with' this particular decision was rather disturbing to say the very
least. I hope we never witness such a bad move again.

    Additionally, this action is likely to cause users to become even
more cautious when it comes to investing in NEW releases like the TT,
where, we are told, we must like the "Wedding Cake" cabinet because that's
that. The TT model expected to ship first is alleged to be a far cry from
the tower configuration TT enthusiastically discussed at its announcement
in Hanover, Germany and Comdex/Fall '89. Will there be a path for those
who decided to support Atari and purchase the preliminary TT to obtain the
'better' tower style TT later on? I think not. By recalling a number of
Atari's past remarks online, the users, most likely, will be told all the
same snappy remarks they have been getting all along about an upgrade
path. Or, will they? Hmmm another unanswered question.

    Granted, the PORTFOLIO has kept the ship afloat, but where is it

going? Multitudes of folks who own the original version are about to face
that UGLY, ILL-TEMPERED, UPGRADE OGRE.   The indications are loud and
clear that change is in the wind. Portfolios are now being discounted and
sold by dealers who are not bashful about selling mail order thus,
effectively taking business from other dealers' territories. Perhaps
Atari's pros have decided to allow a marketing "free-for-all?

    Tos 1.4, now this was an exercise in marvelous marketing management
this had to be the most on again, off again, offering the world had ever
known. Chris Roberts prematurely released this information to us and at
that, it was erroneous information. However, once it made it to market,
the reception was strong and the users (even now) are clamoring for the
chipsets (6 chip and 2 chip).   Atari has stated, on more than one
occasion, that the chips must be installed by a dealer and the recommended
retail price is: $90.00. Interesting enough, we find this product being
bandied about. While Atari's hands are tied, (price fixing is a no-no)
they do offer a factory recommended price. Unfortunately, certain dealers
seem to take delight in trying to cut the throats of every other dealer in
the country with these idiotic price wars. Just this past week we see
where a notable dealer has advertised they will sell TOS 1.4 via the mails
and for less than 90.00!! Why recruit dealers and allude to territories
when this sort of thing is allowed to occur? This is truly the recipe to
make sure the whole magilla croaks. Hopefully, those dealers who seem to
delight in killing the market, other dealers and Atari (indirectly) will
find themselves "backordered" more often than not.

    The Atari warehouse has plenty of Mega4 Computers - Color Monitors
CDROM - SLM804 - Portfolio - Lynx - SX212 - but NO SM124 Monochrome
Monitors, 1040ST, 520ST, STE and of course, NO MEGA2 STs. Oddly enough,
this is not the first time, remember recently in the past, about this time
last year when there was a shortage of SC1224 monitors? Perhaps this is
the beginning of the implementation of product change and inventory
rollover.

    Apparently, Atari's new wonder boys who are the "right hands" of the
Tramiels have professed themselves to be sales and marketing gurus. Could
it be they are undercover marketing saboteurs recruited by the competition
to sink Atari? <<snicker>> Please take a moment to ponder the
magnanimous results these wonders have actually posted, that's right, it
only takes a moment to see there is nothing to get charged up over. Look
back and consider the time prior to the holidays and right after Comdex..
Atari's stock went up handsomely in anticipation of the results "promised"
by these professionals. As one of them said awhile back; "Atari is like
an Aircraft Carrier, it is now turned into the wind and preparing to
launch its planes".. fantastic imagination, but NO results worth talking
about. And it now appears the darn thing has been torpedoed.

    The most upsetting news is Sam's decision NOT to participate in
Spring/Comdex '90 and other US Industry related shows. In light of this
decision, all that can possibly be said is, Sam seems to rely on some of
the industry's most inept, ill informed advisors. It becomes more than
slightly evident that there are some desperately needed changes in the
personnel directly responsible to Sam as they are NOT bringing to him the
REAL grass roots information from the US userbase and industry in
general. Isn't it rather coincidental that the same person(s) who
appeared to put the US dealer network belly up are now handling the
international efforts. The USA is still in the international scene too
guys. It is more than apparent that the US market is looked at as being a
crippled, ugly duckling. We never were really out of the mushroom patch,
somebody merely turned the lights on ..temporarily. The time has come for

Sam to go directly "into the trenches" to see and hear for himself the
real facts and not the pablum he is being fed by his advisors, the so-
called pros.

     What is happening now, without a doubt, is a full blown disaster.
Announcements such as these (expressing a desire to NOT participate in US
industry dedicated shows) is a loud and clear message to all that the
company really has nothing new to show and ship in the USA and therefore,
finds participation in these shows (COMDEX - SEYBOLD - CEPS etc..)
unwarranted.   If the other Atari worldwide entities have the right to
decide which show(s) they attend, why then is Atari US still governed by
the CEO? Shouldn't Atari US and its executives be making these decisions?
Folks, by not being present at these shows in the USA, Atari is once again
snubbing the US market.   The cottage computer industry in the USA isn't
going to sit on its collective duff waiting for Atari to decide that its
really there.   Things must happen this year, else, another brand will
totally dominate this market too.   That is a sad thought because this
market is there waiting for Atari take charge.   Folks, too many of the
dyed in the wool Atari supporters are coming forward expressing sheer
frustration with Sunnyvale and proclaiming they are finished with Atari
for ever more. This is scary! When are they going to wake up out there?
When the wolf bites them in the derriere? It would certainly bolster the
sagging stock picture. Don't believe me?   Check the market, the market,
in general, is down by approximately 12% and Atari's stock is slipping
downward at about 47%.

     The loud and clear message is, the smart money folks have lost faith
in Atari and in particular, those who are making the decisions. Sam, you
must get the real facts for yourself, bypass the pseudo corporate warriors
and join the ranks of executives who demand to hear and see the stark
naked truth for themselves. The caste system is dead in the USA, mingle
with the 'untouchables' you will soon know the truth. Thus enabling you
to guide the good ship Atari on a true course of success.

In summation;
     As time goes on, it becomes more and more apparent that the top at
Atari is a very lonely place, and as such, the Tramiels are in my humble
opinion being misled and/or badly advised. Whether or not this is meant
to be is another story.   The important matter here is, it seems to be
happening, it appears they are being told only what someone else "thinks"
'they need to know'.   The bottom line is quite simple, they NEED to be
told all the facts not just what is thought to be important by someone
else. Hopefully, this will soon begin to occur, for only then will we see
an end to the seemingly unfounded and irrational moves that come from
Atari.   In short, it appears that the Tramiels are being 'shielded' from
the real thing... for what reason? Only time will tell.

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> Stock Market ~ CPU NewsWireâ ¢   Watchin' the schekles grow!
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                                        THE TICKERTAPE
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by Michael Arthur

Concept by Glenn Gorman

     Atari Stock went down 1/4 of a point on Monday, and was down another 1/4 of a point on Tuesday.   On Wednesday it was down 3/8 of a point, and on Thursday, Atari Stock went up 1/4 of a point.   On Friday, Atari Stock was down 1/4 of a point.   Finishing up the week at 7 3/8 points, Atari stock is down 7/8 of a point from the last report.

     Apple Stock is down 1 1/2 points from Friday, January 19, 1990.
        Commodore Stock is up 3/8 of a point from 1/19/90.
          IBM Stock is down 1 3/4 points from 1/19/90.

       Stock Report for Week of 1/22/90 to 1/25/90

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STock|  Monday   |   Tuesday   | Wednesday  |  Thursday    |    Friday    |
Reprt|Last   Chg.|Last    Chg.|Last    Chg.|Last     Chg.|Last      Chg.|
-----|----------|------------|-----------|------------|-------------|
Atari|  8   - 1/4|7 3/4   - 1/4|7 3/8  - 3/8|7 5/8    + 1/4|7 3/8     - 1/4|
     |          |            |           |            | 40,500 Sls |
-----|----------+------------+-----------+------------+-------------|
 CBM |  8   - 1/2|  8     ---- |8 1/2  + 1/2|8 7/8    + 3/8|8 7/8     ---- |
     |          |            |           |            | 88,600 Sls |
-----|----------+------------+-----------+------------+-------------|
Apple|33 1/4  - 1|33 3/4  + 1/2|  34    + 1/4|34 1/8   + 1/8|32 3/4   -1 3/8|
     |          |            |           |            |1,618,300  Sls|
-----|----------+------------+-----------+------------+-------------|
 IBM |96 5/8  - 2|97 1/2  + 7/8|97 1/2  +3/4|95 7/8  -1 5/8|96 7/8    + 1  |
     |          |            |           |            |1,836,400  Sls|
-----'---------------------------------------------------------------'
```

    'Sls' refers to the # of stock shares that were traded that day.
    'CBM' refers to Commodore Corporation.

    With the stock at 12.5 in December, it was running ahead of itself at that time.   Therefore, its present position is seen as an average. The outlook for Atari Stock is predicted to become much brighter in March. The deciding factor is whether or not Atari's current decision makers continue to see the US market as a waste of time because of a totally impotent sales network. And when and if the US market enjoys the sales of the new products, STACY and STE.

ARE THERE REALLY UNREASONABLE DELAYS??
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preface

   The FCC is blamed for many things these days, just a scant few weeks
   ago, they were faulted by us and many others for the latest
   controversy that flared up over the Texas Telecommunications flap.
   Well, it seems the FCC is catching heck again over the speed of its
   type acceptance program. In particular, why the big delays over the
   STACY and STE??

We present a few questions and answers that may help clear the air.

   Question:
        Why is it that IBM and all the 'big' guys never seem to have a
        problem with type acceptance.

   Answer:
        The bottom line here is quite complex, but here are a few ideas.
        The primary reason IBM etc... have little or no problems is their
        units are truly modular in design.   This results in having a
        group of sub chassis that have been previously 'type accepted'.
        The FCC actually has inspected the units in bits and pieces prior
        to the submission of the complete device. Since most of the sub-
        chassis had been type accepted the 'whole unit' is virtually
        assured to 'fly' through the system.

   Question:
        Does   the FCC actually test each and every new product that
        carries its certification authorization?

   Answer:
        Not hardly. In most cases, a device is submitted to a lab that
        is local to the manufacturer's facility and more often than not,
        the testing site is a privately owned lab that is authorized to
        perform the emission and type acceptance testing procedures. If
        the device submitted passes the requirements and meets the type
        acceptance guidelines for which it is submitted, the testing site
        would then issue a certificate of type acceptance and the records
        of same are then forwarded to the FCC.   The FCC does however,
        perform type acceptance test also, but considering the enormity
        of electronic devices capable of all sorts of emissions, if they
        were to test each and every new device, wait would be impossible
        to bear with. Thus, the testing is permissible by private labs.

Question:
    Does the FCC actually hold up products to be tested for months
    and months?

Answer:
    Absolutely not. The average time span from start to finish for
    type acceptance   testing, in normal cases, is four to six weeks.
    If   there   are   extenuating   circumstances,   (not   passing,
    corrections, resubmission etc.), then the individual or firm
    having made the submission is well aware of the causes of the
    delays and can, in most cases, expedite the process. In fact,
    the FCC will advance a resubmission to the point is was, at the
    time of failure, they do not require that the process be started
    from step one. Unless of course, the changes to the product
    being re-submitted are so vast as to require such.

    In   preparing   these   points   of information,   it   is   hoped that the
confusion generated by a lack of valid information is somewhat quelled.
The   situation   is   totally   avoidable   if a manufacturer or importer will
forward pre-production models of the devices for testing and once passed
provide statements of continued compliance.   This would in most cases,
preclude the situations we are seeing where the product is flowing freely
to all parts of the world EXCEPT THE USA. The FCC is in no way to blame
for this happenstance.

Editor Note:
    Apparently Atari is doing EXACTLY the same thing it has in the past,
shipping to the bigger European market first in large numbers. According
to our information, we are told; "Throughout Europe the only machine
generally available now is the STE!" It is sad to see an arm of the US
Government being made the scapegoat in this scenario.   It simply is not
the case.   Atari submitted the STE for FCC testing long after having
shipped the devices to Canada and Europe.   Once again, the USA takes a
back seat.... Another promise to the US market unfulfilled.

_____

> Beckemeyer Development CPU/STR Tech Notesâ ¢   Tools - Multitasking
  =======================================

                    Micro RTX and MT C-Shell

    Since the introduction of Micro RTX and MT C-Shell there has been
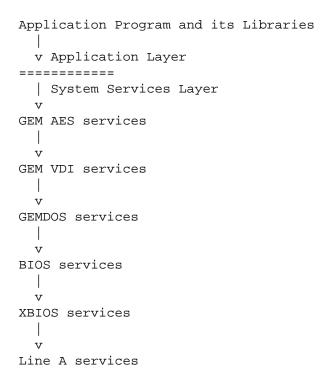confusion between the two. In an attempt to address this, I have prepared

the following brief discussion.

Micro RTX is a Real-Time Multitasking Executive. Micro RTX is a general purpose operating system kernel. It is the kernel used in the MT C-Shell system.

Micro RTX also implements multitasking TOS compatibility. It implements all the GEMDOS and BIOS calls and adds some new TOS-level calls as well.

Micro RTX is not an end-user application and includes no intrinsic interactive programs. It is more like a subroutine library; RTX by itself doesn't do anything. Micro RTX is a tool for developing stand-alone multitasking applications. MT C-Shell is an RTX application that emulates a UNIX environment. Micro RTX is very simple and general purpose. It has very few intrinsic limitations and is easy to customize via program extensions and "hooks". MT C-Shell installs hooks into RTX that support a UNIX-like multitasking multiuser environment. MT C-Shell actually extends the RTX kernel, just as any other RTX program could.

The standard (non RTX) TOS system breaks down roughly as follows:


```
        Application Program and its Libraries
          |
          v Application Layer
        ============
          | System Services Layer
          v
        GEM AES services
          |
          v
        GEM VDI services
          |
          v
        GEMDOS services
          |
          v
        BIOS services
          |
          v
        XBIOS services
          |
          v
        Line A services
```

The system services are not perfectly layered. An application may actually use a set of services at various layers in a number of acceptable combinations (e.g. GEMDOS only, AES/VDI only, AES/VDI and BIOS etc.) Non graphics applications (e.g. .TOS or .TTP) typically won't use the GEM services. Some graphics applications may bypass the VDI and use Line A directly.

MICRO RTX installs replacement GEMDOS and BIOS system services and installs a new set of "MICRO RTX" services. Applications that use the normal system services won't be affected. However, applications that "know" about the new services can take advantage of advanced system features for multitasking, interprocess communication etc.

MICRO RTX provides the low-level building blocks for building a

higher-level OS interface.   Such an interface is demonstrated in MT
C-Shell and the VSH Visual Shell.   RTX could also be the basis of a
stand-alone application which could benefit from multitasking, such as
TurboPOS, where multitasking and interprocess communications services of
MICRO RTX are used in a sophisticated multi-user distributed data-base
system, based on the client-server model.

    VSH is an "outer-layer" to the base MT C-Shell which provides a GEM
windowing interface.   It sets up device drivers and a GEM
application/accessory to manage "virtual terminals", running commands
inside GEM windows, even while another GEM application is running at the
same time.

    Another application benefiting from multitasking is networking, where
server tasks could run "in the background".

    I hope this brief introduction helps to answer a few questions about
MICRO RTX, MT C-Shell, and VSH.

                              David -- Beckemeyer Development

_____

> PC DITTO 2 CPU/STR OnLineâ ¢   As the PAL flip - flops...
  =========================

ctsy GEnie Atari RT

Below, we present the ongoing saga of the user's lament with the latest
entrant into the ST arena, PC-Ditto II.

SALVIUS; posts,

OK, I guess I'm missing something.. AG writes a single message saying they
are now devoting their time to the software update.

How does that solve the problems I've read here (I believe they also said
they did NOT read this topic thoroughly, I'm still trying to figure that
out, how they could afford not to spend a half hour capturing this topic
with all of the vital info here):

1) The board don't not fit one bit at all no how in most STs...

2) The clip is poorly designed for many users, and there is a problem
   physically connecting it to the 68000 chip...

3) Some people cannot even boot up their computers, OR the ST operating
   mode is slowed down or otherwise affected. Software CAN'T fix that!!!

4) The board is obviously 100% incompatible with the blitter chip. Hey,
   people! Wake UP! YO! This is an internal board! What are you going
   to do, permanently sacrifice your blitter chips??? It may not be
   the greatest chip that Atari ever invented, and software might
   work faster (Turbo, etc.), but hey, it is a part of your megas! I don't
   care what the chip is, and AG cannot be forgiven for failing to test
   PCDII in a machine with a mega, given the HISTORY of blitter problems
   over the last year.

Guys, I'm shaking my head, and giving up. When Supercharger is available,
I'll buy that. My patience ended with AG's last message. This is absurd,
and AG's ONLY answer is to do a recall, whether software can patch a few
ST's or not! I would not think of tearing my ST apart for anything, and
I'm not buying an AT case. Thank you, but no thank you.

>>>Vinny

C.RICKERT; posts,

I just got back from the atari store which i deal with, I had stopped in
not because i received my pcditto but instead for a memory upgrade to 2.5
meg. But while in the store two different customers brought their pcdII
boards in after failing in their attempt to get them running(they all said
that they locked up) The tech asked if i would mind if he looked at theirs
first since he had not seen one yet and i figured that i also could learn
something of interest to most of you and myself since i am also waiting.
Within about 2-3 hours both units were repaired installed and working
fantastic now waiting for mine will be twice as bad.

JIM ALLEN ----- the technician knows you and said if you rush his orders
for the boards he has ordered he will be more than happy to help you out.
He also asked me to let everyone who has a board and wishes to return it
know that he will buy it from you for $169.95 so that way everyone will be
happy. the name of the dealer is COMPUTER CELLER LOCATED IN ST.CHARLES IL.
THEIR PHONE # IS (312)584-4048 I HOPE THAT THIS HELPS SOME OF YOU OUT ALSO
IF ANYONE IS INTERESTED IN RETURNING THEIR UNIT AND IT IS STILL IN
ORIGINAL CONDITION I WILL PURCHASE IT AND PAY POSTAGE. LEAVE MAIL. THANK
YOU CHUCK

J.ALLEN27; posts,

There is that one rev of the 1040 that nobody has any troubles with, the
board goes in and works. I have a distinct feeling that this rev of the
1040 is the one Ag developed the board in...so of course it works. It's
the rest of us who don't have one of those 1040s that need a fix.

Computer Celler's order does go out on Monday...coincidence huh? But
really
there are only 3 problems:

1: It doesn't live well with blitters...most not at all, some slightly,
    and some sort of.

2:   There is some kind of an interrupt related bug that is hardware

sensitive and so manifests itself as most machines not DOS booting.

3: It don't fit most machines...certainly not in conjunction with memory
    upgrades, etc.

A SW fix will bag #2, a HW fix (a PAL maybe) will bag #1, and I have no
idea how they will deal with #3. But it is good to know that Nevin and I
aren't the only ones having seen PCDII work.

Category 19, Topic 2
Message 354   Mon Jan 29, 1990
M.GENT   at 01:34 PST

AVANT-GARDE,
     When the next (and probably smaller) revision comes out, could I
upgrade to it? This MONSTER board is impossible to mount in my machine.

Editor Note:
    While we are aware of the AG folks efforts to resolve their
difficulties with PCD2, we still feel the best course of action would be
to become more accessible to the users.   Most feel that the problems
surrounding PCD2 will, in time, be ironed out. In the meantime a strong
consideration should be aimed at a) becoming more accessible and b)
upgrading to a smaller pcb that will fit in any ST regardless of the
model.

 _____

> "THE DREAM" CPU/STR FOCUSâ ¢   A good idea whose time has come.
  =========================

                            "The Dream"
                            =========

An open letter to Atari, Dealers, Developers and Users.

    The Atari engineering department continues to produce astounding
machinery.   The STE and TT are well improved machines in a mature
environment. Atari is also doing very well fiscally.   A lot of Atari's
current financial success is due to the Atari Portfolio. The world's
smallest MSDOS computer has captured the imagination of computer
aficionados world wide.

Both the STACY Transportable (Midi Controller) and the TT have a very
classy feel and give an experienced user the feeling of almost unlimited
power.   At last Atari's video resolution is second to none in the
microcomputer market. If the TT does indeed release in a timely manner at
less than $2000 and if the STACY is priced at $1495 for the basic floppy
system, the pledge of "Power without the Price" will be truly fulfilled.

In fact Atari has a virtual plethora of equipment and third party
support for this equipment is substantial. From Parsec boards, to Mac and
IBM adaptors, to Calamus, Pagestream, and Ultrascript, as well as music
sequencing and sampling, point of sale systems, and even dedicated
industrial control Mega ST's, there is no dearth of niche development for
our machine which has somewhat disappointing sales figures.

This brings us to the crux of the problem. In my opinion, the Atari
ST/TT line is the broadest base of technically superior hardware available
from any company. But every major computer company has an Achilles' Heel.
IBM's is their graphic performance.   They just aren't fun machines, and
there are too many graphic standards. The Mac's is price coupled with a
black and white standard which is dominant on their machines. The Amiga's
problems are poor resolution and some doubt about the financial stability
of Commodore. Tandy has a poor image due to their Radio Shack heritage
and current IBM compatible technology. Atari has one major problem.
Marketing. All of our minor problems stem from this basic flaw.

The public attitude needs to be changed.   Atari has tried various
outside agencies including recently a division of Chiat Day, the
advertising agency credited with Apple's success.   They lasted about
thirty days, then rehired and now finally, been given broader and more
encompassing duties. Frequently, Atari has mounted in house campaigns.
These have been dismal. Some of the promotions have been enticing, all of
the hardware is desirable, and potentially well supported. The one thing
Atari has not been able to come up with is a campaign to inspire the
masses.

I suggest that perhaps because of the owners coming from Canada, they
misunderstand some aspect of the American market. We must certainly
compliment the Tramiel family on what they do well. Atari is financially
stable, and it was on the verge of ruin when they took over it. The ST
consistently offers the most bang for the buck and is in my opinion the
wonder machine of the decade.

On the other hand, the American dollar is spent on fads. The hula
hoop, Davy Crockett, Nehru jackets, Pet Rocks, and Apple Macintoshes are
all fads.   The Atari ST has not become a fad because it has not been
advertised properly.

I know this may sound self aggrandizing, but after four years as an
Atari ST dealer, having to battle to survive as Jack Tramiel did in the
marketplace, I think I am more in touch with users, user groups,
developers and the American public than any Atari corporate officer. In
fact I studied American Culture through graduate and post graduate school
and have a degree in Anthropology.   That I chose an economic life of
marketing Atari is partially a testimony to the culture change computers
are wreaking in our lives and partially due to Atari's accessability, both
in ease of use and availability for less money.   What makes Atari
inaccessible is the lack of knowledge of their product by the American
public.

I say; "we can change that. One way is by supporting "The
Revolution", Don Thomas' ideas on the users selling the brand. The second
is hiring me as consultant or marketing specialist for Atari.   In one
year's time we can double Atari's dealers and quadruple Atari's ST sales
in the U.S. with judicious advertising at a percentage of gross specified
by Atari.   Jack Tramiel and Sam Tramiel told me 10%. I submit that under
my direction Atari can spend 8-10% on advertising, reach 10 times as many
people, quadruple sales, and create the public image necessary to set the
ST as a new standard firmly in the American economy.

     If you feel as I do that Atari's major shortcoming is in its public
relations, from the general public, through dealer and user group
organizations, then I am asking you to write Jack Tramiel, the chairman of
the board to give us, the Atari users a chance to market their machine
with me as the coach with certain powers in their company.   This is not
some kind of a takeover or assertion of democracy in action. After all,
Atari is a family run company. I'm just suggesting that this one aspect
of business could be managed better by me as someone coming up from the
ranks. After all, when queried about marketing at COMDEX last week,
Leonard Tramiel said, "What marketing?"

     If you support this move to better market the ST/TT line please write:
                    Jack Tramiel, Chairman of the Board
                            Atari Corporation
                           1196 Borregas Avenue
                           Sunnyvale, CA 94086

     And please say: I'd like to see Atari ST/TT machines more widely
                     sold and used. I think Bill Yerger has some good
                     ideas. Why don't you give him a try?

                                 Thanks,

                     Bill Yerger, owner Zephyr/Microworld

Editor Note:
     Recently, the rumor mill has been active to the extent that we have
heard there are certain Atari upper level employees who feel Mr. Yerger is
not exactly what Atari expects him to be.   Well, allow me folks.. Bill
purchases MORE Atari products for sale in his dealership in one month than
most dealers purchase for resale in a six month combined period. And ..he
is not one of the price cutting comedians we see who try to impersonate a
real dealer. Yet the same few "Axemen" near the top feel it necessary to
try and take this man to task. I say it is because Yerger KNOWS what he
is talking about and could, if he became a part of the decision making
process at Atari, make life very miserable for these few vindictive
characters who seem to make a career of misinforming the Tramiels. As
time goes by, it becomes more clear just who is blowing smoke at Atari and
it still boils down to the old BROWN-NOSE-SYNDROME of telling the boss
things he either likes to hear or strongly impresses him. The corporate
warriors and their jousting to gain the favor of the Tramiels is, once
again, becoming rather painfully obvious.

_____

- Chicago, IL.   ***** STACY NOW DELAYED BY CHINESE NEW YEAR! *****

    What has to be the most UNBELIEVABLE EXCUSE of the year? The sales
rep for Atari, in the Chicago area, was overheard saying; "The arrival of
the Stacy Laptop has been delayed as a result of the celebration of the
Chinese New Year." As I pick myself up from the floor, tears streaming
down my cheeks from laughing so hard, I wonder if the sales rep thought
the folks in this dealership were really that gullible.   New Horizon
Distributors needs to obtain new writers to produce their hilarious
material, this one is a bit far fetched.

- New York City, N.Y. **** MEGA2 PRODUCTION AND SALES DISCONTINUED! ****

    After calling and inquiring about a MEGA2 computer and its sale price,
a major East Coast Distributor, J&R Music, informed us that the Mega ST2
computer has been discontinued.   This comes as no surprise to this
reporter as the recently released production run was a heavily modified
version incapable of accepting any type of memory upgrade.

- Washington, D.C.   ***** STE PRODUCTION TO BE ACCELERATED! *****

    Amidst complaints alleging the US market is being neglected on a grand
scale, it is reported that the production quotas for the STE have been
increased to bring the figure up over 25,000 units produced per month. At
this time, the bulk of this production is destined for the European
market, it is hoped that Atari will win FCC type acceptance soon and begin
shipping the STE in the USA.

- Munich, Germany   ***** BORLAND TO RELEASE TURBO C/ST V2.0 *****

    Here is some news and an update on Turbo C for the ST. An ST
programmer for Borland Germany in Munich said last friday if all goes the
way it's planned, Turbo C/ST v2.0 and the source level debugger TD v1.0
will be released in March (1990).

    That date does not apply to the English documentation. They still
haven't found a producer/publisher/whatever for that. Sorry, no good
news there yet. There are all sorts of new goodies, such as a complete
PC-compatible BGI (Borland Graphics Interface) implementation. And TD is

a sight to see.   Incidentally, he said that Borland Germany received a
number of complaints about the fact that TC/ST is not available in the
USA. He suggested that those folks who wish to buy TC, if there was an
official US version, should write to Borland USA and request an English TC
version.   It's entirely up to Borland USA to make such a version
available, Borland Germany is more than willing to comply.

- London, U.K.   ***** SMALLER LYNX TO SELL FOR $99.00! *****

    A notice in Electronic Gaming, January 1990 issue, states that Atari
has a scaled down version of the Lynx under development.   Unlike its
luxurious big brother, it will not be quite as fancy, it will be smaller
and more compact with a smaller color LCD screen, it will not have screen
flip and it is slated to be available in late March or April.

- Rockford, IL.   **** ICD POISED TO RELEASE POWERFUL NEW SOFTWARE ****

    ICD Inc. is now beta testing a group of new programs destined to be
regarded as the most powerful programs ever written for use in the mass
storage device arena.   This new software will allow users of the older
versions of TOS to utilize partitions up to a quarter gig in individual
size and users of the newer versions of TOS, (1.4 or greater), may use up
to half a gig for each partition.   Additionally, a desktop accessory is
included which permits the user to have any number of partitions, the acc
will activate and deactivate partitions and change the boot pull-up
order.   After having used this software as a beta site, all we can say at
this point is.. "If you think the ICD utilities and booter you are
presently using is great, you ain't seen nuthin' yet!

_____

> A 'MOMENT' CPU/STR HUMORâ ¢   Not quite what I was taught but cute..
  ========================

The_Load_Prayer

                Our_program,(who art in memory, "HELLO_WORLD", be thy
                name). Thy O.S. come, thy commands be done on the screen as
                it is on disk. Give us this day our daily data, and forgive
                us our I/O errors as we forgive those whose bad sectors are

against us. Lead us not into frustration, and deliver us
              from crashes. For thine is the application, the algorithm
              and the solution, looping forever and ever.

                                                               .. Return

   _____

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                              ... Ziggy Zagnut